

The Chandra X-Ray Observatory

Martin C. Weisskopf, NASA/MSFC

The Chandra X-ray Observatory, the third of NASA's four Great Observatories and its flagship mission for X-ray astronomy, was launched by NASA's Space Shuttle Columbia on July 23, 1999. The first X-ray sources were observed on August 12, 1999. The brightest of these sources named Leon X-1 in honor of Chandra's Telescope Scientist who played the leading role in establishing the key to Chandra's great advance in angular resolution. Over the past years, the Observatory's ability to provide sub-arc second X-ray images and high resolution spectra has established it as one of the most versatile and powerful tools for astrophysical research in the 21st century. Chandra explores the high-energy regions of the universe, observing X-ray sources with fluxes ranging over more than 10 orders of magnitude. The longevity of Chandra also provides a long observing baseline enabling temporal studies over time-scales of years. I will discuss how the Observatory works, the current operational status, and scientific highlights covering a variety of objects from stars with nearby planets that impact the stellar activity to the deepest Chandra surveys.